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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,446	12/05/2003	Scott A. Burton	59427US002	9352
32692 7590 08/19/2010 3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427			EXAMINER GHALI, ISIS A D	
			ART UNIT 1611	PAPER NUMBER
			NOTIFICATION DATE 08/19/2010	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/728,446	Applicant(s) BURTON ET AL.	
	Examiner Isis A. Ghali	Art Unit 1611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 June 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,7-35,37-39 and 45-51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,7-35,37-39 and 45-51 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/10/2010</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The receipt is acknowledged of applicants' amendment and IDS, both filed 06/10/2010.

Claims 1-4, 6-35, 37-39 and 45-50 previously presented and prosecuted.

Claim 6 is canceled and claim 51 is added by applicants' amendment filed 06/10/2010.

Claims 1-4, 7-35, 37-39 and 45-51 are pending and included in the prosecution.

Rejections and/or objections not reiterated from previous office actions are hereby withdrawn. The following rejections and/or objections are either reiterated or newly applied. They constitute the complete set presently being applied to the instant application.

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct

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from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-4, 7-35, 37-39 and 45-51 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-51 of copending Application No. 10/917,002, and over claims 21-30 of copending Application No. 10/917,102. Although the conflicting claims are not identical, they are not patentably distinct from each other because the subject matter claimed in the instant application is fully disclosed in the referenced copending applications and would be covered by any patent granted on the copending applications since the referenced copending applications and the instant application are claiming common subject matter as follows: method of coating silver compound on a substrate comprising combining silver-containing compound with ammonium-containing compound in a solution, coating the solution on a substrate and drying the substrate. The present claims anticipate the claims of the copending applications.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments

3. The examiner acknowledges applicants' intention to provide an appropriate response upon an indication of otherwise allowable subject matter and in the event the nonstatutory obviousness-type double patenting rejections are maintained. Therefore the above rejection is hereby maintained.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 25 and 26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 25 and 26 recites the limitation "the article" in second line of each claim. There is insufficient antecedent basis for this limitation in the claims or in claims 1 and 15 from which claims 25 and 26 respectively depend.

Response to Arguments

6. Applicant's arguments filed 06/10/2010 have been fully considered but they are not persuasive. Applicants argue that claim 25 has been amended to remove the expression "impregnated with sparingly soluble silver-containing compound", and claim 26 has been amended to remove the expression "impregnated with silver oxide".

In response to this argument, it is argued that the claims remain lacking antecedent basis for the limitation “article” that not recited in either of claims 1 or 15 from which claims 25 and 26 depend respectively.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 1-4, 6, 9-14, 25, 27-30, 33-35, 45, 46, and 48-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davis et al. (US 2,813,059) in view of Murtfeldt (US 4,592,920).

Current claim 1 is directed to a method of coating silver compounds on a substrate, the method comprising:

providing a sparingly soluble silver-containing compound, wherein the sparingly soluble silver containing compound is silver oxide,

providing an ammonium-containing compound,

combining the sparingly soluble silver-containing compound with the ammonium-containing compound to form an aqueous solution prior to coating on a substrate,

subsequently, coating the solution formed by combining the silver-containing compound and the ammonium-containing compound on a substrate,

and drying the solution to form a coated substrate that is stable against darkening when exposed to at least one of visible light, ultraviolet light, electron beam, and gamma ray sterilization;

wherein the dried coating comprises the sparingly soluble silver-containing compounds deposited from the coating solution and further wherein the dried coating is essentially free of silver metal.

Claim 27 further recites oxidizing agent in the coating solution. Claim 48 further recite the expression "the method consisting essentially of", and claim 50 recites the

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expression "the method consisting of". Claim 49 further recite that the "coating step is carried out with single coating solution". Claim 51 further add that the ammonium containing compounds is essentially all removed after drying the substrate.

Davis teaches unexpectedly that substantially water-insoluble silver compounds can be precipitated on the surface of fibrous article wherein the deposited silver compound shows no tendency for discoloration after long exposure to direct sunlight and shows highly germicidal effect (col.2, lines 56-69; col.9, lines 56-64). Davis disclosed process for coating the surface of an article comprising the steps of wetting the surface of the article by spraying to its surface, i.e. coating, an aqueous solution comprising sparingly soluble silver compound and ammonia to form complex cations with all the silver in the solution, removing any undesired excess of the composition, drying the wetted article to deposit the desired silver compound in a condition wherein it is light stable (col.3, lines 7-25, 46-48; col.5, lines 7-15; col.7, lines 24-36; claim 1). The solution is applied to the article by spraying, dipping or padding (col.3, lines 7-10). Sparingly soluble silver compounds include silver phosphate, silver thiocyanate, and silver carbonate (col.3, lines 60-65). The ammonia is used so that the pH of the solution is 9.0 in order to provide clear solution without the treated article becoming colored upon exposure to light (col.5, line 73-col.6, line 7). The reference teaches removing ammonia and any other ingredients, which reads on claims 10 and 11 (col.7, lines 29-36). The reference did not disclose heating of the solution during preparation or during coating, therefore it is implied that these steps are performed under ambient temperature, i.e. less than 40 °C. The article is cellulosic fabric or paper, i.e. film (col.6,

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lines 68-70). The reference discloses that the treated product has the sparingly soluble silver compound being the sole remaining material on the surface of the article, therefore has no tendency to become discolored (col.9, lines 56-63; col.10, lines 10-16). The coating composition may comprise bleaching agent that is oxidizing agent (col.8, lines 50-60; col.9, lines 46-51). The disclosure of the reference meets the expressions “consisting essentially of” and “consisting of” as recited by claims 48 and 50 respectively.

Although Davis teaches sparingly soluble silver compounds, however, the reference does not explicitly teach silver oxide as instantly claimed by claims 1, 27 and 48-51.

Murtfeldt teaches coating of medical devices with composition containing antimicrobial metal that is biocompatible with body including silver oxide (abstract; col.2, lines 1-3; col.3, lines 22-25, 32-33).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to coat a medical article using an aqueous solution comprising sparingly water soluble silver salt, ammonium compound and oxidizing agent as taught by Davis, and replace the silver salt with silver oxide taught by Murtfeldt. One would have been motivated to do so because Murtfeldt teaches that silver oxide is biocompatible with body. One would reasonably expect coating a medical article with an aqueous solution comprising silver oxide, ammonium compound wherein the coating is safe and biocompatible with the body.

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11. Claims 7, 8, 15-24, 26, 31, 32, 37-39 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Davis and Murtfeldt as applied to claims 1-4, 9-14, 25, 27-30, 33-35 and 45, 46, 48-51 and further in view of WO 02/43743 ('743).

The combined teachings of Davis and Murtfeldt are previously discussed in this office.

Although Davis combined with Murtfeldt teach medical article coated with an aqueous solution comprising silver oxide and ammonium compound to form the coating solution, however, the reference does not explicitly teach the ammonium carbonate as instantly claimed by claims 7, 8, 15-24, 26, 31, 32, and 47.

Although Davis teaches the antibacterial effect of the article coated with solution comprising sparingly soluble silver compound and ammonium compounds, however, does not explicitly teach the use of the article as wound dressing as instantly claimed by claim 37-39.

WO '743 teaches photostabilization of silver compounds (abstract). Materials that facilitate photostabilization of silver compounds include ammonium carbonate and peroxides. Stabilized silvers is useful as wound dressing (page 3, lines 24-30; page 4, lines 1-15; page 5, lines 3, 10-15; page 7, lines 1- 4, claim 9).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to coat a medical article using an aqueous solution comprising sparingly water soluble silver oxide and ammonium compound as taught by Davis combined with Murtfeldt, and replace the ammonium compound with ammonium

carbonate and use the composition for coating wound dressing as taught by WO '743. One would have been motivated to do so because WO '743 teaches that ammonium carbonate facilitates photostabilization of silver and stabilized silvers is useful as wound dressing. One would reasonably expect coating a wound dressing using an aqueous solution comprising sparingly water soluble silver salt and ammonium carbonate wherein the coating is photostable.

Response to Arguments

12. Applicant's arguments filed 06/10/2010 have been fully considered but they are not persuasive.

Applicants argue that Davis lacks:

Firstly: the teaching of silver oxide.

Secondly: Davis does not teach an ammonium-containing compound; and combining the silver oxide with the ammonium-containing compound to form an aqueous solution prior to coating on a substrate. Davis teaches ammonia and water soluble aliphatic amines that not ammonium-containing compounds as required in the present claims. Examples of ammonium-containing compounds are found at page 3, lines 17-21 of the present specification.

In response to these arguments, it is argued that:

Firstly: the combination of Davis with Murtfeldt teaches silver oxide. This argument is moot in view of the new ground of rejection.

Secondly: Davis clearly teaches aqueous solution of sparingly water soluble silver compound and ammonium compounds. At col.5, lines 7-12, Davis clearly teaches that the “the treating solution prepared using water”, i.e. aqueous. Claims 1-4, 9-14, 25, 27-30, 33-35 and 45, 46, 48-51 that are rejected over Davis in view of Murtfeldt do not require any specific ammonium compounds. Ammonia and aliphatic amines taught by Davis read on ammonium compounds claimed by the rejected claims because limitation from specification cannot read into the claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Regarding claims 7, 8, 15-24, 26, 31, 32, and 47 that require specific ammonium compounds, WO '743 teaches the specifically claimed ammonium compounds.

Applicants argue that combining Murtfeldt with Davis would destroy the function of Davis to deposit the desired silver compound from a solution with proper control of conditions. Davis does not teach or suggest forming an aqueous solution by combining a silver compound with an ammonium-containing compound, and Murtfeldt does not teach or suggest any aqueous solution of a silver compound. Murtfeldt does not show that silver oxide is any more biocompatible than other silver compounds. Any preference for silver oxide in Murtfeldt is related to it being readily comminuted to the desired particle sizes. The Office Action has not provided a reason as to why the disclosures of Davis and Murtfeldt should be combined. Even if motivated to try silver oxide, Murtfeldt in combination with Davis does not provide a reasonable expectation of

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success to form an aqueous solution by combining silver oxide and an ammonium-containing compound. A prima facie case of obviousness has not been established

In response to these arguments, it is argued that Davis clearly teaches aqueous solution of sparingly water soluble silver compound and ammonium compounds. At col.5, lines 7-12, Davis clearly teaches that the “the treating solution prepared using water”, i.e. aqueous. Murtfeldt is relied upon for solely teaching silver oxide as being preferred over other silver salts because it is biocompatible. One having ordinary skill in the art at the time of the invention, by combining Davis and Murtfeldt, would reasonably expect coating a medical article with an aqueous solution comprising silver oxide, ammonium compound wherein the coating is safe and biocompatible with the body.

It should be noted that the motivation to combine references can be different from the ones set forth by Applicant. That is, as long as motivation exists to combine the elements, the problem to be solved does not have to involve the same reason. The fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

As such, the examiner respectfully submits that there is motivation to combine Davis with Murtfeldt and reasonable expectation of success exists.

Therefore, a prima facie case of obviousness has been established because It is well established that the claims are given the broadest interpretation during examination. A conclusion of obviousness under 35 U.S.C. 103 (a) does not require

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absolute predictability, only a reasonable expectation of success; and references are evaluated by what they suggest to one versed in the art, rather than by their specific disclosure. *In re Bozek*, 163 USPQ 545 (CCPA 1969).

In the light of the foregoing discussion, the Examiner's ultimate legal conclusion is that the subject matter as a whole as defined by the claims would have been *prima facie* obvious within the meaning of 35 U.S.C. 103 (a).

Applicants argue that combining WO '743 with Davis and Murtfeldt does not correct the deficiencies of Davis and Murtfeldt. WO '743 fails to teach or suggest combining a sparingly soluble silver-containing compound with an ammonium-containing compound to form an aqueous solution prior to coating on a substrate. The combination of WO '743 with Davis and Murtfeldt fails to provide a motivation for one of ordinary skill in the art to use ammonium carbonate other than in the manner it is used in WO '743. The Office Action has not provided a sufficient reason to combine the references. Even if motivated to try ammonium carbonate to dissolve silver oxide, WO '743 in combination with Davis and Murtfeldt does not provide a reasonable expectation of success, and lacks all of the elements of the presently claimed method. A *prima facie* case of obviousness has not been established.

In response to these arguments, it is argued that Davis clearly teaches aqueous solution of sparingly water soluble silver compound and ammonium compounds. At col.5, lines 7-12, Davis clearly teaches that the "the treating solution prepared using water", i.e. aqueous. Murtfeldt is relied upon for solely teaching silver oxide as being

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preferred over other silver salts because it is biocompatible. WO '743 is relied upon for the solely teaching of ammonium carbonate having the advantage of facilitating photostabilization of silver, therefore useful as wound dressing.

One having ordinary skill in the art at the time of the invention, by combining Davis, Murtfeldt and WO '743 would reasonably expect coating a medical article with an aqueous solution comprising silver oxide and ammonium carbonate wherein the coating is safe and biocompatible with the body.

It should be noted that the motivation to combine references can be different from the ones set forth by Applicant. That is, as long as motivation exists to combine the elements, the problem to be solved does not have to involve the same reason. The fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

As such, the examiner respectfully submits that there is motivation to combine the Davis with Murtfeldt and WO '743 and reasonable expectation of success exists.

Therefore, a prima facie case of obviousness has been established because it is well established that the claims are given the broadest interpretation during examination. A conclusion of obviousness under 35 U.S.C. 103 (a) does not require absolute predictability, only a reasonable expectation of success; and references are evaluated by what they suggest to one versed in the art, rather than by their specific disclosure. *In re Bozek*, 163 USPQ 545 (CCPA 1969).

In the light of the foregoing discussion, the Examiner's ultimate legal conclusion is that the subject matter as a whole as defined by the claims would have been prima facie obvious within the meaning of 35 U.S.C. 103 (a).

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Isis A. Ghali whose telephone number is (571) 272-0595. The examiner can normally be reached on Monday-Thursday, 6:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sharmila Landau can be reached on (571) 272-0614. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Isis A Ghali/
Primary Examiner, Art Unit 1611

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